1991

Index to Volume 53

This index includes everything published in *The American Biology Teacher* during 1991 (Volume 53) except filler material. Book reviews in the Title Index are listed with the names of the authors of the books in parentheses, not of the reviewers, who are listed in the Author Index. Initial articles (a, an, the) are not considered in alphabetization in the index. The index is alphabetical word-by-word. For example: "educational" would follow "education theory." Page numbers indicate the first page of the article or department in which the entries appear.

Entries are in three categories: Subject, Title and Author. All entries include one of the following key codes:

A = Article V = AV Review R = Book Review
F = Feature E = Editorial L = Letter

A typical entry might be: Zoos 5:555A

SUBJECTS

Acronyms 8:484A
Algorithm 7:426A
Allele 2:95A
Analogies....1:43A
Animal Behavior 4:236A
Authoring Tools/Computers 5:310F
Bee Stings....5:275A
Bibliographies 6:359
Biological World 3:132F
Biology Education 8:479A
Biology Lessons 7:410A
Biology News....8:496A
Biology Today....1:56F, 2:118F,3:181F,4:250F,5:306F 6:370F,7:438F,8:500F
Biotechnology 2:98A
Bloopers 8:452E
Boron 8:486A
Bywords 6:335A
Cardiovascular....7:394A
Cell Metabolism 6:339A
Central Dogma 7:436A
Colorado River 7:405A
Concept Mapping 4:214A
Conceptual Loops....4:220A
Curriculum 1:31A, 10:400A
DIALOG 2:115A
Dichotomous Keys 1:29A
Diet 6:354A
Diffusion 2:102A
Directed Inquiry 4:243A
Dissection 4:211A, 5:272A
Dissection, Alternatives to 3:154A
Doublespeak 6:325E
Ecological Structures 2:85A
Ecology 3:170A
Ecosystems 8:489A
Electrophoresis 8:490A
Environment 3:172A
Environmental Crisis .3:146A
Enzymatic Reaction ..6:349A
Evolution/Creationism 2:91A
Evolutionary Labs 4:205A
Evolutionary Simulations 7:442F
Genetic Engineering ..5:294A
Genetics, Transformation of 3:179A
Genetics 3:164A
Genomic DNA Isolation 7:428A
Geotropism 5:285A
Gravitropic Studies....5:290A
Hands-on Science 6:345A
Health 5:265A
Helmont 8:458A
Hydroponics 4:233A
LEP Students 1:20A
Library Assignments .5:301A
Library Resources 5:298A
Macroinvertebrates....8:462A
Mammalian Cells 5:287A
Masai 5:260E
Microbes 2:72A
Microbiology 1:10A, 3:162A
Mitosis 2:107A
Mychorrhizae 1:13A
Nutrition 6:376F
Pasteur 8:467
Plant Growth Responses 2:111A
Plant Light 6:351A
Population Growth, Study of 4:229A
Reasoning 6:330A
Science Education 4:199A
Science Literacy 7:419A
Seaweed 3:159A
Security 4:196E
Seed Germination 7:432A
Shorelines 1:37A
Simulations....6:380F
Summer School Biology 3:176A
Sun and Skin 3:137A
Textbooks 1:4E
Tumor Suppressor Genes 1:22A
Video 1:25A, 5:281A
Videodiscs 1:48F, 2:122F, 3:185F
Writing 7:388E

TITLES

AV Reviews

Adirondacks: The lives and Times of an American Wilderness(Direct Cinema Ltd.) 6:374V
Age of Dinosaurs (National Geographic Society)..3:189V
America's Wild Turkey (Griffen Productions) 1:54V
Animals, Animals (National Geographic Society)..2:117V
Call to the Wild (Wilderness Productions) 2:117V
Crayfish (external). Crayfish (internal) (Human Relations Media) 4:248V
Cutting and Splicing, DNA (Films for the Humanities) 5:305V
DNA Techniques (Films for the Humantities and Sciences) 6:375V
Drugs and How They Affect You (National Geographic Society) 1:54V
Earth: Voices of a Planet (American Gramophone Records of Omaha) ...2:117V

Earth First: The Struggle for the Australian Rainforest (Gaia Films) 8:504V
Earthworm (Human Relations Media) 5:305V
Freshwater Clam (Human Relations Media) 5:305V
Gaia: The Living Planet (Bullfrog Films) 3:190V
Global Dumping Ground (The Video Project) 7:444V
Greenhouse Crisis: The American Response (The Video Project) 8:504V
Life Revolution, The (Films for Humanities) 8:504V
Nuclear Winter: Changing Our Way of Thinking (Educational Film and Video Project) 6:374V
Photosynthesis (TV Ontario) 1:54V
Rain Forests: Proving Their Worth (Interlock Media Associates) 7:444V
Recombinant Technology (Films for the Humanities and Science) 7:444V
Seasons of the White-tailed Deer (Berlet Films) ...4:249V
Sowing the Seeds of Disaster (Films for the Humanities & Sciences, Inc.) 6:374V
Wilderness Idea, The (Direct Cinema, Ltd.) 4:248V
World Population (ZPG Population Education Program) 3:189V

Articles

Addressing the Needs of the Concrete Reasoner, by James D. Trifone 6:330A
Alternative Differential Identification Approaches for 2 Similar Bacilli Commonly Studied in Microbiology, By Isaiah A. Benathen 3:162A
Assessment of Health Knowledge in College Women, By Gail Richmond 5:265A
Bee Stings & Their Consequences, by Robert M. Rupp 5:275A
Bibliographic Instruction Program for College Biology Students, by Trudi E. Jacobson 5:298A
Biological Bywords, by Rita Hoots 6:335A
Biology, History & Louis Pasteur, by Robert Hendrick 8:467A
Biology in the News, by R.A. Hoots 8:496A
Biotechnology Outlines for Classroom Use, by Sr. Mary Jane Paolella 2:98A
Central Dogma in Action, The, by Helen K. Pigage ...7:436A
Chaparral & Fire Ecology: Role of Fire in Seed Germination, by Nancy L.C. Steele and and Jon E. Keeley 7:432A
College Students' Knowledge of Cardiovascular Disease: Implications for the Biology Teacher, by L.R. Krupka and A.M. Vener 7:394A
Colorado River in the Grand Canyon, The, by Susan Speece 7:405A
Construction of Biology Lessons: A Meta-Paradigmatic Approach, The, by Jaime Sanchez 7:410A
Developing Science Process Skills Through Directed Inquiry, by Paul J. Germann 4:243A
DIALOG - A Telecommunications & Biological Research System Available for High School Students & Staff, by Kenneth M. Highfill ..2:115A
A Dichotomous Key to Tree Cones and Fruits of the Eastern United States, by Linda T. Collins 1:29A
Digging Deeper into Helmont's Famous Willow Tree Experiment, by David R. Hershey 8:458A
Dimensions of Hands-On Science, by Andrew T. Lumpe & J. Steven Oliver 6:345A
Dropping Your Genes – A Genetics Simulation in Meiosis, Fertilization & Reproduction, by Thomas Atkins 3:164A
Ecological Succession in the Pleistocene in Glacier National Park, Montana, in Relation to Current Successional States in the Western Mountains of the U.S., by Edwin A. Arnfield 2:85A
Encounter with Acronyms in the Biology Classroom, An, by Girish Govindarajan ..8:484A
Exploring Growth (& Mitosis) Through a Learning Cycle, by Anton E. Lawson 2:107A
Exploring Soil Ecosystems, by Deborah R. Finley 8:489A
Genetic Engineering – A Lesson on Bioethics for the Classroom, by Kerri Armstrong 5:294A
Genetic Transformation of Bacteria, by Robert Moss 3:179A
Hi-Tech Alternatives to Dissection, by Richard T. Strauss 3:154A
Human Biology, Health Education and the "Video Generation," by Priscilla Mattson 1:25A
Impact of Using Interactive Video in Teaching General Biology, The, by Samuel D. Huang 5:281A
Instant Animals & Conceptual Loops (Teaching Experimental Design, Data Analysis & Scientific Writing), by Jan A. Pechenik 4:220A
Introduce Successful Library Assignments to Students in Biological Sciences, by Francis E. Nussbaum, Jr. 5:301A
An Introduction to Mycorrhizae, by Carol A. Janerette 1:13A
Investigating the Boron Requirement of Plants, by Charles W. Bohnsack 8:486A
Light Measurement & Calculations, by David R. Hershey 6:351A
Macroinvertebrates as Indicators of Stream Health, by Brook S. McDonald, Gary W. Mullins and Stuart Lewis 8:462A
Mammalian Cell Culture Simplified, by Robert Moss 5:287A
Marking the Trail: Starter Bibliographies for High School Student Research, by Dorothy Jones 6:359A
Meaningful Learning in College Biology Through Concept Mapping, by Carol Briscoe 4:214A
Microbe Phobia & Kitchen Microbiology, by Robert P. Williams 1:10A
Minimum Core Curriculum for Introductory High School Biology, A, by William H. Leonard, Claudia Fowler, Cheryl Mason, Nancy Ridenour, and Carol Stone 7:400A
A New Challenge for Teachers, by Marie Pansy Vande Steeg 1:20A
Nonmajors' Biology: Enhanced Curricular Considerations, by Anthony J. Nastase 1:31A
pH & Rate of Enzymatic Reaction, by Roy B. Clariana 6:349A
Personalized Diet Evaluation for High School Students, A, byBernard L. Frye & Robert L. Neill 6:354A
Planet Earth in Crisis: How Should Science Educators Respond?, by Rodger W. Bybee 3:146A
Planning More Appropriate Biology Education for Schools, by Robert E. Yager and Paul Tweed 8:479A
Plant Growth-Responses to Touch – Literally a 'Hands-on' Exercise!, by Marian Smith 2:111A
Politics & Prejudice: Dissection in Biology Education Part I, by David R. Gilmore 4:211A
Politics & Prejudice: Dissection in Biology Education Part II, by David R. Gilmore 5:272A
Practical Technique for Measuring the Behavior of Foraging Animals, by Rosemary J. Smith 4:236A
Pros & Cons of Environmental Debates, The, by Stephen J. Zipko 3:172A
Protein Electrophoresis in the Biology Classroom Using "Safe" Gels, by Thomas Atkins 8:490A
Quantification in an Introduc-

tory Diffusion Experiment, by George E. Snow 2:102A
Resources for Teaching Evolutionary Biology Labs, by William F. McComas 4:205A
Review of Science Education: Past Failures, Future Hopes, A, by Eva M. Ogens 4:199A
Sabbatical Journey into the Microbial World, A, by Linda Lundgren 2:72A
Sampling of Basic Life Science Literacy in a College Population, A, by Thomas R. Lord and Clint Rauscher 7:419A
Seaweed Buffet, A Simplified Integrated Fish Culture Hydroponics System, A, by Gary Emberger4:233A
Selection for Spontaneous *Escherichia coli* Streptomycin Mutants Using Basic Fuchsin, by Ronald Walkosz ...7:430A
Simple & Safe Genomic DNA Isolation, by Robert Moss and Sondra Soloman 7:428A
Student-Generated Analogies in Biology, by James L. Middleton 1:43A
Study of Sandy Beach Zonation, A, by Steve K. Alexander 1:37A
Summer School Remedial Biology – An Innovative Approach, by Stanford R. Hill, Jr. 3:176A
Sun & Our Skin: An Update for Biology Teachers, The, by C.J. Anastasiou 3:137A
Teaching About Controversial Issues: Resolving Conflict Between Creationism & Evolution Through Law-Related Education, by Ford Morishita 2:91A
Textbook Errors & Misconceptions in Biology: Cell Metabolism, by Richard D. Storey 6:339A
Tumor Suppressor Genes: A Key to the Cancer Puzzle?, by Steven B. Oppenheimer 1:22A
Using an Algorithm When Solving Hardy-Weinberg Problems in Biology, by John E. Stencel 7:426A
Using Dandelion Flower Stalks for Gravitropic Studies, by Paul E. Clifford 5:290A
Using Lemna to Study Geometric Population Growth, by Larry E. DeBuhr ...4:229A
Using Light Microscopy to Study Geotropism, by Greg Fraser Barclay 5:285A
Value of Student-originated & Student-run Ecology Projects, by Joseph L. Fail, Jr. 3:170A
What Is a Recessive Allele?, by Werner G. Heim ...2:95A

Book Reviews

Amazing Things Animals Do, The (McGrath) 5:315R
Anatomy and Dissection of the Fetal Pig (Walker) 3:191R
Animal Consciousness (Radner & Radner) 4:255R
Ants, The (Holldobler & Wilson) 4:255R
Becoming An Effective Classroom Manager: A Resource For Teachers (Steere) 5:316R
Biologic: Environmental Protection by Design (Wann) 4:255R
Biotechnology: A Textbook of Industrial Microbiology (Crueger) 7:446R
Body Clock: The Effects of Time on Human Health (Hughes) 1:60R
Books for Young Explorers (National Geographic Society) 5:314R
Briefbook: Biotechnology, Microbes and the Environment (Witt) 6:382R
But Is It Science? (Ruse) 2:127R
Ecology and Field Biology (Smith).....6:382R
Emergence of Life: Darwinian Evolution from the Inside, The (Fox) 2:127R
Evolution of Sex (Smith, Margulis, Raven, Hamilton, Hardy & Hefner) 2:128R
Handbook of Protoctista (Margulis, Corliss, Melkonian & Chapman) 6:383R
History of Science and Technology: A Narrative Chronology, The (Marcorini) 1:60R
Human Anatomy & Physiology (Carola, Harley & Noback) Human Anatomy & Physiology (Hole) 5:315R
Human Evolution (Birx) 2:128R
Human Genetics (Jenkins) 7:447R
Human Physiology: The Mechanisms of Body Function (Vander, Sherman & Luciano) Human Physiology (Fox) 4:254R
Immunology, A Foundation Text (Davey) 8:505R
Invertebrates (Brusca & Shaffer, Brusca).....5:314R
McGraw Hill Dictionary of Scientific and Technical Terms (Parker); Cambridge Dictionary of Science and Technology; Cambridge Dictionary of Biology (Walker) 6:384R
Microorganisms: From Smallpox to Lyme Disease, Readings from Scientific American Magazine (Brock) 7:446R
Ninety-Nine Gnats, Nits, and Nibblers (Berenbaum)5:316R
Our Native Fishes (Quinn) 8:505R
Our Natural Resources and Their Conservation (Kircher, Wallace & Gore) 2:126R
Professor Farnsworth's Explanations in Biology (Heppner) 3:191R
Restructuring Science Education: The Importance of Theories and Their Development (Duschl) 6:383R
Robert Koch: A Life in Medicine and Bacteriology (Brock) 4:256R
Science Fair Success (Bombaugh).....3:192R
Toxic Threat: Hazardous Substances Poison Our Lives (Zipko).....3:192R
Ways to Teach Biology: The Whys and Hows of Changing to a Process Approach (Hanks) 7:447R
Wisdom of the Genes: New Pathways in Evolution (Wills) 8:505R

Editorials

A Biologist in Wonderland: The Texas Biology Textbook Adoption Hearings, by Joseph D. McInerney 1:4E
Bloopers, by Randy Moore 8:452E
Doublespeak of Science, The, by Randy Moore 6:325E
How We Write About Biology, by Randy Moore 7:388E
Masai & Kenya Gold, The, by Stephen J. Zipko 5:260E
Security, by Dan Wivagg 4:196E
Shock Value, by Dan Wivagg 3:132E
The Ultimate Teaching Tool, by Dan Wivagg 2:68E

Features

Ah, Sweet Mysteries of Life, by Maura C. Flannery 3:181F
All in the Family, by Maura C. Flannery 4:250F
Considering Plants, by Maura C. Flannery 5:306F
Enhancing Biology Lectures with Videodisc, by David W. Kramer 1:48F
Evolutionary Simulations, by David W. Kramer 6:380F
Extracellular Digestion, by John Lennox 6:376F
Hearts & Onions: A Second Look at the Commonplace, by Maura C. Flannery 1:56F
Interactive Biology with Videodisc, by David W. Kramer 3:185F
Links to Literature, by Maura C. Flannery 6:370F
More Evolutionary Simulations, by Richard Duhrkopf 7:442F
Problems in Beloit, by Maura C. Flannery 8:500F
Respect for RNA, by Maura C. Flannery 7:438F
Selecting Authoring Tools for Use in Authoring Biology Courseware, by Michael A.J. Collins 5:310F
Simply Interesting, by Maura C. Flannery 2:118F
Videodiscs for Biology, by David W. Kramer 2:122F

Letters to the Editor
by Roy K. Baer 6:328L
by Bob Ballantyne 6:327L
by Laddie J. Bicak 2:69L
by Tim Block.....6:327L
by Beth Clewis 6:328L
by Phillip A. Cochran 2:69L
by Karen Davis.....4:197L
by Edward Drexler 5:262L
by Werner G. Heim ...2:69L
by David R. Hershey .2:70L
by David J. Hicks 2:70L
by Ann Kindfield.....8:454L
by Ralph W. Lewis....2:70L, 6:328L
by Madisonville North Hopkins High School 8:454L
by Yumiko Nakatani .5:262L
by Andrew N. Rowan 8:454L
by Melissa Stanley 8:454L
by Edward Taub 6:328L

AUTHORS

Alexander, Steve K. ..1:37A
Aloi, Jane.....5:281A
Anastasiou, C.J. 3:137A
Armstrong, Kerri 5:294A
Arnfield, Edwin A. 2:85A
Atkins, Thomas 3:164A, 8:490A
Barclay, Greg Fraser 5:285A
Barnhart, Mike 3:189V
Benathen, Isaiah A. ...3:162A
Bicak, Charles J. 2:126R, 3:192R
Bicak, Laddie J. 2:69L
Biggs, Alton L. 2:127R
Bindel, Henry J. Jr. 5:316R
Block, Tim 3:189V
Bohnsack, Charles W.8:486A
Briscoe, Carol 4:214A
Brown, Joel S. 4:236A
Bybee, Rodger W. 3:146A
Carter, Jack L. 4:255R
Clariana, Roy B. 6:349A
Clifford, Paul E. 5:285A, 5:290A
Cochran, Philip A. 2:69L
Collins, Linda T. 1:29A
Collins, Michael A.J. .5:310F
Colverson, Peter 3:191R
Cratsley, Christopher .7:390F
Daniel, Paul 2:128R
Davis, Karen.....4:197L
Davis, Linda S. 5:305V
DeBuhr, Larry E. 4:229A
DeMaria, JoAnn 5:314R, 5:315R
Drexler, Edward 5:262L
Duhrkopf, Richard 7:442F
Edmondson, Marilyn H. 4:249V
Eichman, Philip 4:254R, 5:315R
Emberger, Gary 4:233A
Emsley, Michael 6:384R
Evans, Edward W. 6:383R
Fail, Joseph L. Jr., ...3:170A
Finley, Deborah R. 8:489A
Flannery, Maura C. ... 1:56F, 2:118F, 3:181F, 4:250F, 5:306F, 6:370F,7:438F,8:500F
Fletcher, Robert 6:384R
Fogle, Thomas 3:190V
Fowler, Claudia 7:400A
Frye, Bernard L. 6:354A
Geller, Lotte R. 4:255R
German, Paul J. 4:243A
Gilmore, David 4:211A, 5:272A
Govindarajan, Girish .8:484A
Hays, Rachel 2:117V, 5:305V
Heim, Werner G. 2:69L, 2:95A
Hendrick, Robert 4:467A
Hershey, David R. 2:70L, 6:351A, 8:458A
Hicks, David J. 2:70L
Highfill, Kenneth M. .2:115A
Hill, Stanford, R. Jr. ..3:176A
Holtz, Robert E. .....2:117 V
Hoots, Rita A. 5:316R, 6:335A, 8:496A
Horn, Toby M. 6:382R
Hounshell, Paul B. 3:176A
Howell, Carolynn S. .. 1:54V
Huang, Samuel D. 5:281A
Jacobson, Trudi E. 5:298A
Janerette, Carol A. 1:13A
Jones, Dorothy.....6:359A
Keeley, Jon E. 7:432A
Kinzie, Mable B. 3:154A
Kramer, David W. 1:48F, 2:122F, 3:185F, 6:380F
Krupka, Lawrence R. 5:265A, 7:394A
LaMaster, Sarah Ulerick 4:214A
Lawson, Anton E. 2:107A
Lavoie, Derrick R. 6:383R
Leonard, William H. .7:400A
Lennox, John 6:376F
Lessow, Barry D. 1:54V
Lewis, Ralph W. 2:70L
Lewis, Stuart 8:462A
Lord, Thomas R. 7:419A
Lumpe, Andrew T. 6:345A
Lundgren, Linda 2:72A
Mason, Cheryl 7:400A
Mattson, Priscilla..... 1:25A
Maxwell, Christine D.3:159A
McComas, William F.4:205A
McDonald, Brook S. .8:462A
McInerney, Joseph D. 1:4E
Middleton, James L. .. 1:43A
Moehring, Pamela 6:374V
Moore, Randy 6:325E, 7:388E, 8:452E
Morishita, Ford 2:91A
Moss, Robert 3:179A, 5:287A, 7:428A
Mullins, Gary W. 8:462A
Nadeau, Robert L. 1:60R
Nakatani, Yumiko 5:262L
Nastase, Anthony J. ... 1:31A
Neill, Robert L. 6:354A
Nickels, Martin K. 2:127R, 2:128R
Nisonger, Claire 4:256R
Nussbaum, Francis E. Jr., 5:301A
O'Shea, Michael W. ..5:305V
Ogens, Eva M. 4:199A
Oliver, J. Steven 6:345A
Oppenheimer, Steven B. 1:22A
Oxlade, Edwin L. 5:290A
Paolella, Sr. Mary Jane 2:98A
Pechenik, Jan A. 4:220A
Peterson, Gordon E. ..4:248V
Pigage, Helen 7:436A
Pitts, Kenneth D. 6:375V
Postula, Michael 6:375V
Rauscher, Clint 7:419A
Richmond, Gail 5:265A
Ridenour, Nancy 7:400A
Roberts, Michael H. .. 1:60R
Rockwood, Larry L. ..4:255R
Roderick, Joyce MacFall 3:164A
Rupp, Robert M. 5:275A
Sanchez, Jaime 7:410A
Shaffer, Jay C. 5:314R
Shmaefsky, Brian 4:248V
Skinner, Jerry M. 6:374V
Smith, David A. 3:191R
Smith, Marian 2:111A
Smith, Rosemary J. ...4:236A
Snow, George E. 2:102A
Solomon, Sondra 5:287A, 7:428A
Speece, Susan 7:405A
Steele, Nancy L.C. 7:432A
Stencel, John E. 7:426A
Stone, Carol 7:400A
Storey, Richard D. 6:339A
Strauss, Richard T. 3:154A
Tashiro, Jay Shiro.....4:220A
Trifone, James D. 6:330A
Tweed, Paul 8:479A
Vande Steeg, Marie Pansy 1:20A
Verner, Arthur M. 5:265A, 7:394A
Walkosz, Ronald 7:430A
Weber, Kurt 5:294A
Williams, Robert P. 1:10A
Wilson, Lise D. 5:298A
Winet, Stephen D. 1:54V
Wivagg, Dan 2:68E, 3:132E, 4:196E
Yager, Robert E. 8:479A
Yocum, Thomas 3:192R
Zipko, Stephen J. 3:172A, 5:260E